

REMARKS

35 USC Section 102 Rejections

The above referenced Office Action rejects independent Claims 1-3, and 7-23 as being anticipated by Yang (US 6,553,472). Applicants respectfully traverse.

With respect to independent Claim1, Claim 1 recites a method for automatically calibrating intra-cycle timing relationships between command signals, data signals, and sampling signals for an integrated circuit device. The method includes generating command signals for accessing an integrated circuit component, accessing data signals for conveying data for the integrated circuit component, accessing sampling signals for controlling the sampling of the data signals, and automatically adjusting a phase relationship between the command signals, the data signals, and the sampling signals to calibrate operation of the integrated circuit device. Applicant points out that the claimed embodiments recite automatic calibration of the cycle timing relationships. The automatic calibration can be performed by, for example, a memory controller.

In contrast, Yang discloses a method for programming clock delays, command delays, read command parameter delays, and write command parameter delays of a memory controller. Yang does not disclose the

automatic calibration and the automatic adjusting as in the claimed embodiments of the present invention. For example, at col. 4 at line 25-34, Yang states that the "...programmable parameters for the MC required for correct and optimum I/O operation with the MC and SDRAM need to be specified. Table 2 lists and describes seventeen related programmable parameters in the MC. Other programmable parameters, such as refresh control and SDRAM initialization parameters are not listed. These timing parameters are necessary for I/O operations such as memory read, memory write, same bank access, different bank access, etc." Applicant points out that this is not automatic calibration and automatic adjustment as in the claimed invention.

Automatic calibrating and automatic adjusting limitations are included in each of the independent claims of the present application. Applicant asserts that Yang describes programming memory controller to operate at the desired point. This is different from automatically calibrating and automatically adjusting, which does not require any programmer input. Accordingly, Yang does not show or suggest the claimed invention as recited in independent Claims 1-22 and therefore Claims 1-22 are not anticipated by Yang within the meaning of 35 USC Section 102.

35 USC Section 103 Rejections

The above referenced Office Action rejects Claims 4-6, 9-11, and 15-18 as being rendered obvious by Yang in view of Suzuki (US 2004/0160833). Applicants respectfully traverse.

As above, Applicant asserts that Yang does not disclose the automatic calibration and the automatic adjusting as in the claimed embodiments of the present invention. The addition of Suzuki does not cure this defect. Suzuki is relied upon for showing a memory controller that controls DDR SDRAM. As with Yang, Suzuki does not show or suggest the automatic calibration and automatic adjusting as in the claimed embodiments of the present invention.


Accordingly, Applicants assert that the claimed invention as recited in Claims 1-22 is not shown or suggested by the combination of Yang and Suzuki, and therefore, Claims 1-22 are not rendered obvious by the Yang and Suzuki combination within the meaning of 35 USC Section 103.

CONCLUSION

The Examiner is urged to contact Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present Application. Please charge any additional fees or apply any credits to our PTO deposit account number: 50-4160.

Respectfully submitted,
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